ABSTRACT

[0096] The present invention provides a system and method for uniform coating of a substrate at high deposition rates by evaporating a coating material in a vacuum chamber. The system includes an evaporator having a heating crucible for containing a coating material to be evaporated and a generally planar heat source disposed so as to heat a surface of a coating material contained in the heating crucible. Preferably, the heat source is manufactured from a ceramic or intermetallic material and includes a first layer defining a first set of openings and a second layer defining a second set of openings wherein the second layer overlies the first layer and is spaced apart therefrom. The first and second sets of openings allow the evaporated coating material to pass therethrough for dispersion of the coating material in a deposition zone defined by a containment shield disposed above the heat source.